

# The Northwest Technology Transfer Center BULLETIN

Number 41

Winter 1993/1994

A Newsletter of the Local Technical Assistance Program (LTAP)

## ***Advanced Technology Means Safer Roads***

For the Washington State Department of Transportation (WSDOT), winter roadway maintenance used to mean routinely patrolling 30 or 40 miles of road to check conditions. This is changing now due to advanced equipment called surface sensor instrumentation that allows crews to monitor roadways by electronics.

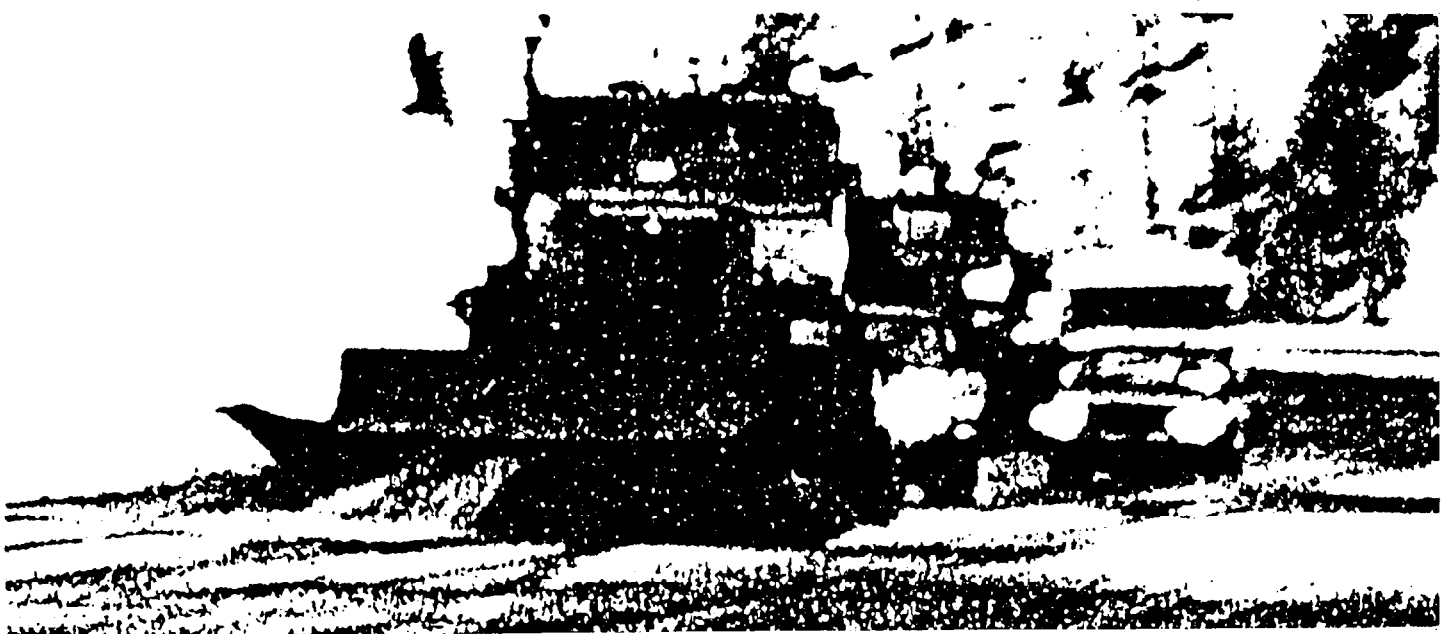
Sensors along the roadway measure air temperature, humidity, pavement temperature, and wind velocity and direction. This information is fed through telephone lines to a main computer at a nearby WSDOT maintenance office. The information is used to determine when and where crews will be needed to keep the highways safe for travel.

Once knowing the location of trouble spots, maintenance workers can get to those areas quicker to sand or plow before a problem becomes more intense.

WSDOT maintenance crews are on duty 24 hours a day, seven days a week during winter months. During late fall, before the full winter maintenance force is in place, and early spring when the full force is no longer needed, information on roadway conditions becomes critical. Using surface sensor instrumentation, supervisors can anticipate work force requirements and schedule crews and equipment according to predicted conditions. This eliminates the need to call crews back to work, which can be difficult and expensive.

WSDOT has installed surface sensor instrumentation on all the major passes; Snoqualmie, Satus, Blewitt, White, and Stevens; as well as around major cities including Seattle and Spokane.

*Source: Adapted from WSDOT "News," October 13, 1993.*



# How to Coach a Winning Team

Have you ever thought of yourself as the coach? Think about it for a minute. As the supervisor, you are responsible for motivating a group of employees to achieve a common goal. This is just like the coach of a professional sports team.

Some of the same methods a coach uses to motivate his "employees" to win a game can be transferred easily into your industrial arena. In fact, Donald E. Schenck of Siemens Industrial Automation Inc. (Johnson City, Tennessee) says that you should be making more than a careful note of the final score when you watch pro teams in action.

Schenck says in a recent "Industry Week" article, few things in life are addressed with as much zeal, passion, and persistence as these efforts (to motivate). Yet, industry somehow persists in the belief that the only way to motivate people to excellent performance is money."

The key to true motivation, Schenck says, lies outside the realm of the dollar. It concerns how employees feel about themselves and their role in their work. To be a good motivator, there are four elements of each employee's personality that you, as coach/supervisor, need to tap into: a sense of challenge, personal accomplishment, belonging, and teamwork.

## **Sense of Challenge**

Matching an employee's strengths and skills with the correct job is an important part of motivation. Obviously, a job that is too difficult will frustrate the employee and lead to feelings of failure. On the other hand, a job that is beneath an employee's physical and mental capabilities will lead to boredom. Because the employee feels his talents are being wasted, he could develop a critical attitude toward management. As the supervisor, you need to emphasize employee strengths and minimize weaknesses. Give each a challenge he can and wants to attain.

## **Personal Accomplishment**

Your employees' feelings of personal accomplishment come from succeeding at a job that provides the right amount of challenge. So, you not only need to know what qualities your employees possess, but also some of their goals. You learn these by talking with them. But, above all, you must listen to hear their goals and ambitions and how they like their work.

Praise and positive feedback are essential to your job as supervisor. Praise should be specific. Instead of saying, "Terrific work," say, "You really came through last week when you finished the Jipco project ahead of schedule." And, just as a coach would do, you should acknowledge effort as well as accomplishment.

**"Praise and positive feedback are essential to our job as supervisor."**

The choice of employee rewards is important. Plaques and certificates indicate that the work is over. Instead, consider giving employees new tools that will help them do their job better.

## **Belonging**

As a good motivator, you should communicate frequently with your employees. During these exchanges, you should exhibit honesty, empathy, supportiveness, fairness, and accessibility and be open to their ideas and feedback.

By asking your employees for their opinions, you give them the opportunity to stake a claim in a project. This gives them a sense of belonging. Consequently, they will take more ownership, and therefore more interest, in the outcome. Having a personal stake in a job fuels the employees' sense of personal accomplishment.

## **Teamwork**

Just think what would happen if all of the players on a football team were not told all the particulars of the game situation. What if they did not know the score or who had the ball or the next play? Chaos would likely result. Certainly, there would be a good chance of losing the game.

The same holds true for your team. As the coach/supervisor, you need to keep your employees informed about company goals and progress. When a "crucial play" is considered, let employees share in the decision making. If you ask for input, make use of it wherever you can. If you have no intention of using employees' ideas from the outset, you are not playing fair.

In the end, when the company wins, make sure that all contributing employees share in the glory, not just the managers and supervisors. Imagine a Super Bowl victory parade that heralded only the coaches. Not a chance! Remember that you are all part of a team, and you are simply the coach.

*Source: Sandy Hubbert, News Service, Office of Public Relations, Louisiana State University.*

### ***1994 Transportation Appropriations Bill Enacted***

President Clinton signed into law the FFY 94 Department of Transportation appropriations bill. The bill provides a nation-wide total of \$38.6 billion for transportation programs, not including spending from the Highway Trust Fund. The bill sets a total spending level of \$19.9 billion for the nation's highway program. The bill also provides a highway obligation ceiling of \$17.590 billion, with \$2.2 billion outside the ceiling for exempt programs such as minimum allocation, emergency relief, and demonstration projects.

Transit funding was set at \$4.58 billion in the bill, the highest level in history according to Federal Transit Administrator Gordon Linton.

Federal Funds available to local agencies in Washington for FFY 94 will be about \$135 million. This represents 91.1 percent in Obligation Authority (OA) compared to 80.5 percent in FFY 93. WSDOT's first quarter allocation of OA from FHWA totaled \$45 million, with local agencies sharing \$19.8 million and the state sharing \$22 million. If the local agencies' share is not sufficient to cover all project submittals received prior to December 31, 1993, Advanced Construction (AC) will be used and then converted in January 1994. WSDOT has requested an additional 25 percent of FFY 94's obligation authority from FHWA.

### ***Transportation Planning Regulations Released***

Statewide and metropolitan planning regulations were released by FHWA and FTA on October 22, 1993. In developing the final rules, four meetings were held around the country whereby 170 comments were received on metropolitan planning and 100 comments were given on statewide planning.

Several key areas in the final rules include certification, reasonably available funding, the public involvement process, the Governor's delegation of authority, linkage between MPOs and state DOTs in the planning process, and the relationship of

the planning rules to the conformity rule. The planning rules were published in the October 28, 1993 Federal Register. The effective date for the rules was November 29, 1993. The FTA and FHWA plan joint regional briefings on the final planning rules, management systems, and conformity regulations. For our area, the tentative schedule is January 24-25, 1994, in Portland. A summary of the major provisions of the new rules has been completed by WSDOT. Contact Toby Rickman of the TRIP Division at (206) 705-7967 or Bill Wiebe at (206) 705-7965.

#### ***For Weather Information on Washington Mountain Passes***

Before driving over the mountain passes, call WSDOT's Mountain Pass Road Report at 1-900-407-PASS for the latest road conditions. Each call costs 35 cents per minute. Reports are limited to two minutes. Those without "900" service can dial 1-206-434-PASS, which is a toll call.

# ***Call for Applicants for the Dwight David Eisenhower Transportation Fellowship Program***

The National Highway Institute (NHI) has six fellowship grants as available:

## **Eisenhower Graduate Fellowships.**

## **Eisenhower Grants for Research Fellowships.**

Eisenhower Historically Black Colleges and Universities (HBCU) Fellowships, Eisenhower Hispanic Serving Institutions (HSI) Fellowships, Eisenhower Post Doctorate Fellowships, Eisenhower Faculty Fellows.

The objective of the program is to attract, enhance, and retain the nation's brightest minds and top talent as a part of the transportation research and engineering. Authorized by the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991, the minimum annual funding for the program is \$2,000,000 which is expected to serve over 100 people.

This article will concentrate on the first two fellowships. For information on the others, contact Ms. Ilene D. Payne at the address given at the end of this article.

## ***Eisenhower Graduate Fellowships***

The purpose of the Eisenhower Graduate Fellowship program is to sponsor professionals and students who are interested in pursuing an M.S., Ph.D., or Sc.D. degree. Persons who apply for the FY 1994 Graduate Fellowships must be planning to start school in the fall 1994.

## **Eligibility Requirements**

Fellowships are open to U.S. citizens who are (1) transportation professionals wishing to obtain research-based graduate engineering degrees, and (2) seniors and MS students wishing to obtain research-based graduate engineering degrees and who plan to enter the transportation profession after completing their higher level education.

Baccalaureate students applying for a M.S., Ph.D., or Sc.D. fellowship must be in their senior year of college. MS students applying for a Ph.D. or Sc.D. fellowship must be in their final year of M.S. study and/or research.

## **Criteria Used For Evaluation of Candidates**

The Graduate Fellowships will be awarded on the basis of: (1) transportation work experience, (2) academic record, and (3) recommendations regarding the applicant's qualifications.

## **Tenure**

Graduate fellowships for M.S. candidates will be for 24 months maximum, and the degree must be awarded within three years. Graduate Fellowships for Ph.D. and Sc.D. candidates will be for 36 months maximum, and the degree must be awarded within five years.

## **Stipends, Tuition, and Other Funding**

Master's Level      \$1,400 monthly

Ph.D./Sc.D. Level      \$1,600 monthly

Full tuition and fees are paid. For M.S., Ph.D., and Sc.D., a one-time expenditure of up to \$1,000 for travel to an annual meeting of the Transportation Research Board to present the findings of their research. There is no dependency allowance and no reimbursement of university administrative costs. Funding is available only during months of enrollment in full-time programs leading to a degree and all unused funds must be returned to the Federal Highway Administration.

## **Schedule for Applications**

Applications must be received by 4 p.m., February 15, 1994. Potential Fellows will be contacted by the National Highway Institute by April 25, 1994, to determine if they will accept the Graduate Fellowship. The Fellowship will be awarded by August 1, 1994, for fall 1994.

## ***Eisenhower Grants for Research Fellowships***

The objectives of this program are to acquaint students with transportation research, development, and technology transfer activities in the United States and to provide talented students with the opportunity to conduct research on important transportation topics at U.S. Department of Transportation facilities.

## **Eligibility Requirements**

Grants are open to applicants who are U.S. citizens enrolled in an accredited U.S. institution of higher education. They should be pursuing a degree in a full-time program in a transportation-related discipline and plan to enter the transportation profession after completing their education. These grants are intended for students who are: (1) in their junior year working toward a Baccalaureate degree; (2) in their senior year and working toward a Baccalaureate degree; and (3) those who have completed their Baccalaureate degree and are enrolled in a program working towards a M.S., Ph.D., or Sc.D. degree.

## **Applicant's Research Project**

Applicants must select one or more projects from a "List of Candidate Research Projects." The selectee will conduct the research at one of the USDOT facilities. Academic credit will be received from the university as determined by the faculty advisor.

## **Criteria for Evaluation**

Fellowships will be awarded on the basis of merit. Evidence of merit will include: (1) match of the student's qualifications with the proposed research project; (2) letters of recommendation; (3) academic records (class standing, GPA, transcripts); and (4) work experience in transportation.

### Tenure

The tenure for this fellowship is normally three, six, nine, or twelve months.

### Stipends, Tuition, and Other Funding

College Junior	\$14,400 year	\$1,200 monthly
College Senior	\$14,400 year	\$1,200 monthly
Master's Level	\$16,800 year	\$1,400 monthly
Ph.D./Sc.D. Level	\$19,200 year	\$1,600 monthly

Tuition and fees that relate to the academic credits for the approved research project will be paid in full. A travel allowance for a reasonable cost of travel to and from the U.S. Department of Transportation facility where they will conduct the research. There is no dependency allowance, and no reimbursement of university administrative costs. Funding is available only during those months in which they are conducting full-time research at a USDOT facility or other approved facility.

### Schedule

Ms. Payne of the National Highway Institute, must receive your applications by 4 p.m., February 15, 1994. Potential will be contacted by April 1, 1994, to determine if they will accept the fellowship awards. Once the award has been made, selectees may begin conducting research at a USDOT facility as early as May 23, 1994, but not later than December 31, 1994.

### Applications

Application forms and further information on these two fellowships may be obtained from the Northwest T<sup>2</sup> Center by contacting Laurel Gray, at (206) 705-7386, or by contacting:

Ms. Ilene D. Payne, Director  
Universities and Grants Programs  
National Highway Institute, HHI-20  
Federal Highway Administration  
6300 Georgetown Pike, Room F203  
McLean, Virginia 22101

Phone: (703) 285-2785

Fax: (703) 285-2791 ■

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## Washington State Modifications to the MUTCD

by Ed Lagergren, P.E.

The 1991 State Legislature directed WSDOT to adopt minimum pavement marking standards for the right edge of the driving lane for urban area arterials that do not have curbs or sidewalks. The standards are to take into consideration all types of pavement markings and their effect on pedestrian, bicycle, and motor vehicle safety.

Recently WSDOT, after many committee meetings with other entities, adopted a new section of the Washington Administrative Code (WAC) that modifies two sections of the *Manual on Uniform Traffic Control Devices* (MUTCD): **Section 3B-6 Pavement Edge Lines and Section 3B-15 Raised Pavement Markers Supplementing Other Markings.**

The modifications to **Section 3B-6 Pavement Edge Lines** require edge lines on all principle and minor arterials within urbanized areas except where curb or sidewalk exists. Edge lines were already required on all Interstate highways and rural multilane divided highways. Edge lines may still be used on other classes of highways. Agencies shall conform to these requirements when they renew or install permanent markings on new or existing roadways.

The modifications to **Section 3B-15 Raised Pavement Markers Supplementing Other Markings** strongly discourage the use of raised pavement markers along the right edge, because raised pavement markers can cause problems for bicyclists. The use of raised pavement markers on the right edge of arterials now requires an engineering study with input from

bicycling organizations. The study must conclude that the markers are essential to preserving pedestrian, bicycle, and motor vehicle safety. Cities and counties with existing raised pavement markers on the right edge line shall remove them when they resurface the roadway. They can be removed earlier at their option.

Raised or recessed pavement markers may still be used along right edge lines on the taper in lane transition sections, on approaches to objects and within channelization at intersections without the engineering study.

These standards shall be in effect unless the legislative authority of the local governmental body finds that special circumstances exist affecting vehicle and pedestrian safety that warrant a site-specific variance to the standard.

How does this affect your agency? You should check your classified arterials to determine if you have gained new edge line responsibilities. You should remember that most raised pavement markers on the right edge must now be removed or justified by an engineering study.

The complete text of the MUTCD revisions will be sent out soon to all agencies in a new edition of the *Washington State Modifications to the Manual on Uniform Traffic Control Devices for Streets and Highways*. If you have any questions about edgelines or have a traffic engineering question, call Ed Lagergren at (206) 705-7388. ■

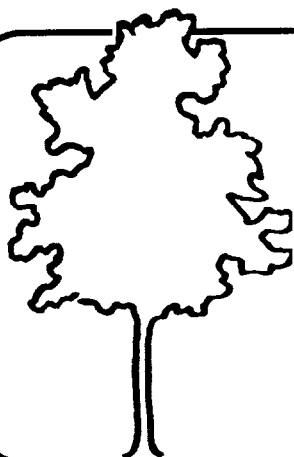
# ***“Road Shows” Enhance Skills***

*by George Crommes*

The fall 1993 “road shows” were completed December 23, 1993. Will Garner, the road show trainer for this fall, relates that he enjoyed working with the frontline employees of Washington’s public agencies and, after retiring from Thurston County, enjoyed talking to his peers again throughout the state. Will extended a special effort to be on the job site at the time requested by the host which required him to “hit the road” in the early morning hours while most of us were still asleep. Will provided his expertise and his friendly presentations at 82 sessions where 993 people from 66 agencies learned a little more to help in their daily work.

We are planning to start our spring “road shows” in the middle of March. Our trainer will begin scheduling his program the first of March. Please give some thought: on having a “road show” for your agency this spring.

As one of the few states having “road shows,” we thought that the time has come to get your official view on this eight-year program. Informally, we have heard very complimentary remarks. Now is the time to put your comments in writing so that we can document your support or nonsupport of this part of our T<sup>2</sup> program. As such, we will be sending each host of the 1993 road shows a very brief questionnaire. Your opinions of having road shows will be tallied and reported so that decisions can be made regarding the continuance of “road shows” for Washington. In advance, thanks for your previous support and interest. ■



***Plan Now to Attend the:***

***45th Annual***

***Road Builders’ Clinic***

***March 1-3, 1994 Red Lion Inn, Spokane***

- How to Turn Adversaries Into Allies — Public Involvement in Public Works Project Planning
- Innovative Financing of Roads and Road Projects
- Partnering: Efficiency Through Conflict Prevention
- Environmental Issues
- Creative Management for Increased Productivity
- How to Save Money on Bridge Replacement and Retaining Wall Construction

# ***Distinguished Service Awards***

*by George Crommes*

An important part of WSU's Road and Street Maintenance Supervisor's Schools this fall is the awarding of Distinguished Service Awards to public works employees. City, county, and

state transportation maintenance people are nominated for the award by their agency's administrators. This year's well deserved awards go to the following people.

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**Rolland Dahmer**, Foreman, Whitman County Public Works.  
Nominated by Lon Pedersen, Public Works Director, and Dan Dunford.

**Greg Rarrick**, Lead Technician, WSDOT District 6.  
Nominated by Larry Chatterton, Assistant District Administrator for Operations.

**Richard Osborne**, Crew Leader for the Street Division of Kennewick. Nominated by Robert Hammond.

**Ron Horn**, Equipment Operator for Garfield County.  
Nominated by Mike Selivanoff, Public Works Director.

**Jack McLean**, Maintenance Superintendent for WSDOT District 2. Cited by Don Senn, District Administrator.

**George Kelley**, Maintenance Supervisor in WSDOT District 5. Cited by District Administrator, Richard Larson and Guy Couture, Acting District Maintenance Engineer.

**Rick Chinchin** of the City of Longview was cited by Steve Harris, Street Superintendent.

**Ron Warner**, backhoe operator for the city of Longview was cited by Steve Harris.

**Lawrence Fisher**, equipment operator for the city of Puyallup was recommended by Tom Heinecke, the city's Public Works Director.

**Russell Lopeman**, equipment operator for the city of Port Townsend. Nominated by Robert L. Wheeler, Public Works Director.

**Bob Eichorst**, lead person of the city of Vancouver.  
Nominated by Robert Tabor, Public Works Supervisor.

**Ken McCutcheon**, Supervisor for the town of Friday Harbor. Cited by Stan Reitan, Utilities Maintenance Supervisor.

**Earl McMillin**, service-writer for Clark County Public Works. Cited by County Commissioners: Dave Sturdevant, John Magnano, and Busse Nutley.

**Terry Logue**, Shop Foreman for Jefferson County Public Works was cited by Earl Wells, Operations Manager.

**Evie Smith**, Equipment Operator for Lewis County. Cited by Robert Berg, Public Works Director.

**Harold Ogden**, Supervisor for San Juan County. Nominated by David Irwin, Operations Supervisor.

**Selvin Scott Stensen**, Traffic Maintenance Supervisor for Snohomish County. Nominated by Steve Pratt, Director, Maintenance and Operations.

**Mike MacAuly**, Equipment Operator for Thurston County. Cited by David Ohnstad, Road Operations Manager.

**Robert Hoover**, Signal Supervisor for WSDOT District 4 and cited by Dale Heise, Operations Engineer.

**Jim Swift**, Bridge Inspector and Foreman for Thurston County. Nominated by David Ohnstad, Road Operations Manager.

**David Polda**, Bridge Maintenance Technician II for WSDOT District 1. Nominated by Thomas Lentz, District Maintenance Engineer.

**Congratulations to all!**

# Skills Enhancement Opportunities

*The purpose of this column is to inform you of the numerous educational opportunities that exist for our Washington State and adjacent states' transportation people. We also place this information on our electronic bulletin board. To obtain a brochure of details on the workshops listed, please contact Laurel Gray at the Northwest T<sup>2</sup> Center (206) 705-7386.*

## **Northwest Technology Transfer Center (206) 705-7386**

The T<sup>2</sup> Center offers or supports numerous workshops of interest to public works agencies in Washington. Announcements are advertised in the newsletter, the *Bulletin*, and flyers are sent out to public works agencies requesting their interests prior to the workshops.

- ❑ T<sup>2</sup> Centers "Road Shows." Begin March 15.

## **County Road Administration Board (CRAB)**

If there is a special class you would like to see developed for counties, contact CRAB at (206) 753-5989.

## **TRANSPED (Transportation Partnership in Engineering Education Development) (206) 543-5539**

- ❑ **Legal Liability — Design, Construction, Traffic Operations, and Maintenance.** January 20-21, Olympia.
  - ❑ **Construction Inspection of Public Works Projects.** February 3-4, Spokane.
  - ❑ **Introduction to Roadway Value Engineering.** February 7-8, Seattle.
  - ❑ **Roadway Value Engineering — Leadership.** February 9, Seattle.
  - ❑ **Public Works Construction Project Management.** March 3-4, Seattle.
  - ❑ **Roadway Geometric Design.** March 9-11, Spokane.
- \*\$120 for engineering staffs of cities, counties, transit districts, and other local transportation agencies in Washington State. \$300 for all other registrants.

## **Asphalt Institute (206) 786-5119**

- ❑ **Principles of Construction of Quality Hot Mix Asphalt Pavements.** February 10, Best Western Executive Inn, Tacoma. February 17, Everett Pacific Hotel, Everett. February 23, Red Lion Inn, I-90 @ Sullivan Road, Spokane. Cost \$75.

## **Careertrack Seminars 1-800-334-6780 or (303) 447-2300**

- ❑ **Total Quality Management.** Bellingham, February 15. Everett, February 16. Olympia, February 18. Seattle, February 17. \$99 per person, \$89 each for groups of three or more.

## **ASCE 1-800-548-2723**

- ❑ **Receiving Water Impacts from Stormwater and Urban Runoff.** January 10-12 and June 27-29, Seattle. Cost \$745 for members, \$845 for nonmembers.
- ❑ **ASCE/WEF Urban Stormwater Management Manual of Practice.** February 7-9, Seattle. Cost \$745 members, \$855 for nonmembers.
- ❑ **Highway Safety: Roadside Design.** March 9-10, Seattle. Cost \$645 members, \$745 for nonmembers.

- ❑ **How to Develop an Effective Plan for Erosion and Sediment Control.** April 21-22, Seattle. Cost \$645 members, \$745 nonmembers.

## **Pacific Lutheran University (206) 535-7330**

- ❑ **Supervisory Survival Skills.** March 16-17, PLU University Center, Tacoma. Cost \$495.

## **Council on Education in Management (510) 934-8333**

- ❑ **Affirmative Action Plans Today.** March 14-15, Portland. March 16-17, Bellevue. Cost \$595.

## **Professional Engineering Practice Liaison Program, University of Washington College of Engineering (206) 543-5539**

(All classes are at the University of Washington unless otherwise noted.)

- ❑ **Drilling and Blasting Techniques** (for construction, quarrying, open pit mining, trenching, and pipe lines). January 24-28, Seattle. Cost \$925.
- ❑ **Seismic Design of Structures II: Design and Detailing of Steel and Reinforced Concrete Structures.** Nine sessions, 4:30-6:30, Tuesday and Thursday, January 18, 20, 25, and 27; February 1, 3, 8, 10, and 15. \$420
- ❑ **Effective Writing for Technical Professionals.** Five sessions, 3:30-6:30, January 20, 25, 27; February 1 and 3. \$325.

## **National Seminars Group 1-800-258-7246**

- ❑ **The Manager's Role as Coach.** Eugene, Oregon, January 27; Medford, Oregon, January 26; Olympia, January 13; Portland, January 14; Seattle, January 12; Wenatchee, January 10; Yakima, January 11. Cost \$98.
- ❑ **The Basics of Facilities Compliance Under the ADA.** February 9, Portland. February 14, Richland. February 15, Spokane. February 16, Seattle. Cost \$145.

## **Washington State University Conferences and Institutes (206) 840-4575**

- ❑ **Telecommunications Infrastructure Planning.** February 9-11, Seattle. Cost \$995 for members, \$1,095 for nonmembers.

## **WSDOT-TRIP Division**

- ❑ **GIS for Urban and Regional Transportation Planning.** January 18-20, Bellevue. Contact Monica Welle (206) 705-7960.

## **Fred Pryor Seminars 1-800-255-6139**

- ❑ **How to Supervise People.** February 4, Portland. February 14, Olympia. February 15, Tacoma. February 16, Everett. February 17, Seattle. February 23, Spokane. Cost \$99.



# Conferences and Meetings

- ❑ **Safety in Public Works.** January 19-21, Holiday Inn, Portland South, Wilsonville, Oregon. Contact Events Solution, Inc. at (503) 928-5055.
- ❑ **1994 Northwest Roads and Streets Conference.** February 2-4, LaSells Stewart Center, OSU, Corvallis, Oregon. Contact Jim Blair at (503) 757-6821 or Bob Layton at (503) 737-4980.
- ❑ **American Traffic Safety Services Association (ATSSA) Convention.** February 13-15, San Jose, California. Contact (703) 898-5400.
- ❑ **International Erosion Control Association. 25th Anniversary Conference and Trade Exposition.** February 15-18, Reno, Nevada. Contact (303) 879-3010.
- ❑ **ARRA Conference.** February 23-26, Palm Aire Spa Resort, Pompano Beach, Florida. Contact ARRA at (410) 267-0023.
- ❑ **Traffic Law Enforcement and Traffic Engineering Conference.** February 23-24, Westcoast Wenatchee Center Hotel, Wenatchee, Washington. Contact Ed Lagergren at (206) 705-7388.
- ❑ **Road Builders' Clinic.** March 1-3, Spokane Red Lion Inn, Spokane, Washington. Contact WSU at (509) 335-3530.
- ❑ **Spring APWA Meeting.** April 12-15, Westwater Inn, Olympia, Washington.
- ❑ **Washington Association of County Road Supervisors' Conference.** May 3-5, Wenatchee, Washington.
- ❑ **WSDOT MPO/RTPO Planning Conference.** May 18-20, Yakima, Washington.
- ❑ **3rd International Conference on Managing Pavements.** May 22-26, San Antonio, Texas. Contact Ing. William Dearasaugh at (202) 334-2955.
- ❑ **Global Congress on Sustainable Development.** June 12-17, New York City, New York. Contact F. H. "Bud" Griffs at (212) 854-8873 for further information.
- ❑ **Association of Washington Cities (AWC) Annual Conference.** June 14-17, Spokane, Washington.
- ❑ **International Bridge Conference.** June 13-15, Pittsburgh, Pennsylvania. Contact (412) 261-0710 for further information.
- ❑ **WSAC Summer Convention.** June 14-17, Hyatt Regency, Bellevue, Washington.
- ❑ **Sixth International Conference on Low-volume Roads.** June 25-29, University of Minnesota, Minneapolis.
- ❑ **1994 International Road Federation Conference.** July 2-4, Calgary, Alberta, Canada. Anyone interested in presenting a paper is requested to submit an abstract. Deadline for abstract is June 4, 1994. Please fax to Marc Brazeau at (613) 736-1395.



# **Free Publications**

For Washington recipients only:  
Contact Laurel Gray at (206) 705-7386  
or SCAN 705-7386 if you want publications.

## **Guidelines for a Good Chip Seal Job**

A two-page brief summary of the basic considerations for chip seal work. Adapted by NWT<sup>2</sup> Center from Oklahoma T<sup>2</sup> materials. (100 copies available)

## **Operator's Daily Maintenance of Motor Graders**

A five-page check list for motor grader operators. Adapted by the NWT<sup>2</sup> Center from materials of the Louisiana T<sup>2</sup> program. (100 copies available)

## **Working With Pesticides**

A brief five-page paper providing ten tips on cleaning pesticide soiled clothing, symptoms of pesticide poisoning, and sprayer operation do's and don'ts. (100 copies available)

## **Traffic Control Devices et. al. and Tort Liability**

A series of articles from various T<sup>2</sup> Centers on risk management and liability cases and issues. Seven pages. (100 copies available)

## **Operating Tips — Flagging**

This poster style paper provides a "quick how-to" for flagging. A handy reference and reminder for your flaggers. Prepared by the NWT<sup>2</sup> Center. (1,000 copies available)

## **State of the Practice — Design and Construction of Asphalt Paving Materials With Crumb Rubber Modifier**

FHWA publication number FHWA-SA-92-022 is a comprehensive overview of the terminology, processes, products, and applications of crumb rubber modifier (CRM) technology. (24 copies available)

## **Highway/Utility Guide**

FHWA publication number FHWA-SA-93-049 provides "state of the knowledge" guidance on the better practices being employed to address the full array of issues which can arise from highway and utility facilities sharing common right of way. (17 copies available)

## **Fish Passage Through Culverts**

This booklet was prepared by the United States Department of Agriculture - Forest Service to provide a set of guidelines for the design and rehabilitation of culverts which allow fish passage. Working as a team, hydrologists, fish biologists, and civil engineers can design, construct, and maintain an acceptable structure with fish passage capabilities. The very vivid principles and criteria can be adapted to the design of any drainage structure. (30 copies available) FHWA-FL-90-006

## **Local Low Volume Roads and Streets Manual**

This well organized manual provides local agencies with basic information on planning, design, construction, and maintenance of local low volume roads and streets. It is easy to use and specific topics may be quickly located. The publication was made possible by the joint efforts of ASCE, FHWA, and the USDA Forest Service and is dated November 1992. (Only 50 copies remain)

## ***Need to Know More?***

***Make Use of  
WSDOT's Library  
A Free T<sup>2</sup> Resource***

*(206) 705-7750  
SCAN 705-7750*

## **Training for New County Engineers/Public Works Directors**

by Vern Wagar, P.E.

The idea of conducting a day-long orientation and training session for new county engineers and public works directors is probably long overdue. Speaking as a former novice floundering in a sea of regulations, such a session would probably have reduced the number of times that I shrieked "What do you mean I can't do that" from several thousand to a few hundred.

At last, a cooperative effort between CRAB and the WSACE/PWD Executive Committee has produced an outline for such an orientation with topics ranging from statutory requirements, to funding sources, to public accounting, to management practices and public/employee relations. The training will be a one day windshield tour conducted at the CRAB offices in Olympia.

The plan at this time is to hold the first session on or about January 13, 1994. More information will follow as the details of the training are worked out. The orientation will be offered on an "as needed basis" and will be open to other county public works staff as space permits.

Contact CRAB at (206) 753-5989.

**Have a comment or suggestion?  
Contact one of our T<sup>2</sup> Advisory  
Committee members or staff.**

Thanks,



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